

REMARKS

Regarding amendments to the specification:

Applicants respectfully submit an amended Sequence Listing, adding SEQ ID NO: 22-26. This amendment does not present new matter, but specifically and individually incorporates the sequences described in the specification, especially Example 4, and graphically represented in the figure accompanying the June 12, 2003, Response to First Office Action.

The new Sequence Listing also properly reflects inventorship in accordance with the petition filed on October 23, 2002, with the response to restriction requirement.

Accordingly, Applicants also respectfully request amendment of the specification at page 40 to insert "SEQ ID NO: 24" as a more precise representation of the sequence originally described. This amendment does not constitute new matter; as provided in MPEP 2163.06, "information contained in any one of the specification, claims or drawings of the application as filed may be added to any other part of the application without introducing new matter." In fact, such cross-reference of sequences described in the specification to those appearing in the sequence listing is required under 37 C.F.R. 1.821(d) and is submitted herewith in compliance with such mandate.

The experimental results have indicated three alternative conditions which do not disrupt promoter function. Combinations of these three possible modifications yield 2^3 , or 8, enabled sequences, as shown in the attached table.

"Native" or "modified" refers to the sequence just prior to the start codon; the native sequence is "cgg"; the modified sequence is "ccc", to create a NcoI restriction site, as described in the specification at page 40 and as captured at filing in SEQ ID NO: 3 vs. SEQ ID NO: 4.

The "5 adenine" or "4 adenine" distinction was captured at filing in SEQ ID NO: 4 vs. SEQ ID NO: 16 and is further described on page 13 of the Response to First Office Action.

The distinction in length, ~0.7 kb vs. ~1.3 kb, was captured at filing in Example 4 wherein vectors V1 and V2 are described.

Length	5 adenine	4 adenine
~0.7 kb	Native: SEQ ID NO: 23	Native: SEQ ID NO: 25
	Modified: SEQ ID NO: 24	Modified: SEQ ID NO: 26
~1.3 kb	Native: SEQ ID NO: 3	Native: SEQ ID NO: 22
	Modified: SEQ ID NO: 4	Modified: SEQ ID NO: 16

Regarding amendments to the claims:

Claims 1-14 and 33-36 were previously withdrawn.

Claims 15-32 are withdrawn in the present amendment.

Claims 37 is amended in accordance with the Examiner's suggestions.

Claims 38-40 are dependent therefrom.

Claims 41-44 are canceled.

Claims 45-48 are amended in accordance with the Examiner's remarks.

Claims 49-52 are withdrawn.

New Claims 53-56 are similar to claims 37-40, rewritten per the Examiner's suggestion at page 9 of the Final Office Action; however, they incorporate the newly-identified SEQ ID NOS: 22, 23, 24, 25, and 26, for the reasons set forth below.

Claims 57-62 are new, incorporating elements of withdrawn claims 27-32, but limited to the 8 specific SEQ ID NOS: 3, 4, 16, 22, 23, 24, 25, and 26.

Claims 63-64 are new, incorporating 95% identity and high-stringency hybridization, respectively, to SEQ ID NOS: 3, 4, 6, 22, 23, 24, 25, and 26.

Claim Rejections – 35 USC § 112, Second Paragraph

The Examiner has rejected Claims 15-32 and 37-40 under 35 U.S.C. 112, second paragraph. Claims 15-32 are rejected as indefinite in that the metes and bounds of “operable fragments” is unclear.

Claims 15-32 have been withdrawn.

Claims 37-40 are found indefinite in that said claims refer to a “group” of nucleic acids, yet only one ATCC deposit accession number is provided.

The Applicants respectfully respond that ATCC accession PTA-2427 comprises SEQ ID NOS: 4, 5, and 16 and note that SEQ ID NO: 5 is a non-elected sequence. Therefore, Claim 37 has been amended to refer to SEQ ID NOS: 4 and 16. Claim 37 now also encompasses SEQ ID NO:3, per the Examiner’s statement on page 6 of the Final Office Action that SEQ ID NO: 3 and 4 can be examined with SEQ ID NO: 16.

Thus, the Applicants ask that the rejections under 35 USC 112, second paragraph, be withdrawn.

Claim Rejections – 35 USC § 112, First Paragraph, Enablement

The Examiner states that Claims 15-32 and 41-52 are rejected under 35 U.S.C. 112, first paragraph, for insufficient enablement.

In light of the Examiner’s statements that (1) the specification is only enabling for SEQ ID NO: 16 (page 3 of Final Office Action) and (2) that SEQ ID NOS: 3 and 4 may be added to the claims (page 6 of Final Office Action), Claim 37 has been amended to include SEQ ID NO: 3, 4, and 16.

The Examiner finds that specific guidance is necessary as to modification of promoter sequences. The Applicants respectfully state that SEQ ID NOS: 22, 23, 24, 25, and 26 represent specific, functional, modified sequences enabled by the specification and have included them, along with SEQ ID NOS: 3, 4, and 16, in Claims 53-56.

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Claims 45-48 were included in the rejection for being based on primers *comprising* SEQ ID NO: 6, 7, 8, 9, or 10. Claim 45 has now been amended to primers *consisting* of SEQ ID NO: 6, 7, 8, 9, or 10.

In view of the amendments and remarks offered herein, the Applicants ask that the rejections for enablement under 35 USC 112, first paragraph, be withdrawn.

Claim Rejections – 35 USC § 112, First Paragraph, Written Description

Claims 15-32 and 41-52 are rejected under 35 USC 112, first paragraph, for lack of written description.

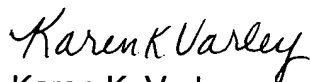
In light of the claim amendments and remarks, Applicants respectfully assert that the written description requirement is met for the claimed invention and ask that such rejections be withdrawn.

CONCLUSION

Applicants believe that all claims under consideration are in condition for allowance, and such action is respectfully requested.

It is believed that no fees are due with this amendment; however, if that is not the case, please charge applicable fees to Deposit Account No. 16-1852.

Respectfully submitted,



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